

Metastatic adenocarcinoma of unknown primary origin

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Abstract Cancer of unknown primary (CUP) origin is the diagnosis when metastatic cancer is found but the primary site cannot be determined. The peculiarity of our case is eleven months after the occurrence of two lesions of florid cutaneous metastases, the primary tumor or metastasis to a second organ could still not be identified despite thorough investigation.

Key words

Metastatic adenocarcinoma of unknown primary origin.

Introduction

The diagnosis of tumor metastatic to the skin is not usually difficult, but identification of the primary source of metastasis can sometimes be a problem. Cancer of unknown primary (CUP) origin is the diagnosis when metastatic cancer is found but the place where the cancer began (the primary site) cannot be determined. Most patients with an unidentified primary tumor have a cell type called adenocarcinoma. Sixty percent of cutaneous metastases are adenocarcinomas and 15% are squamous cell carcinomas.¹ The term adenocarcinoma refers to cancer that begins in the cells in glandular structures in the lining or covering of certain organs in the body. Common primary sites for adenocarcinomas include the lung, pancreas, breast, prostate, stomach, liver, and colon.

Identifying the primary tumor site is important because knowing its location and type often helps doctors plan the best treatment. In recent years, microscopic and other diagnostic techniques have improved dramatically. For this reason, doctors can now determine the primary site in about four out of five cases first diagnosed as CUP.

Case report

A 58-year-old housewife attended our OPD with two slightly painful skin swellings for almost one year. She had also history of loss of weight over that period. On examination, there was a 10cm X 8cm, mildly tender nodule with irregular, mildly scaly and crusty surface on the right hypochondrium (**Figure 1**) which appeared 11 months ago and grew steadily afterwards. A second nodule of dimensions 9cm X 7cm with similar appearance was on the inner aspect of right thigh just below the groin (**Figure 1**) which appeared 10 months ago. Scalpel biopsies from the nodule on abdominal wall showed multiple islands of tumour cells among the collagen fibres in the upper and lower dermis. The epidermis was separated from the tumor nests by

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Figure 1 A 10cm X 8cm nodule with irregular, mildly scaly and crusty surface on the right hypochondrium and a second nodule of dimensions 9cm X 7 cm with similar appearance was on the inner aspect of right thigh just below the groin.

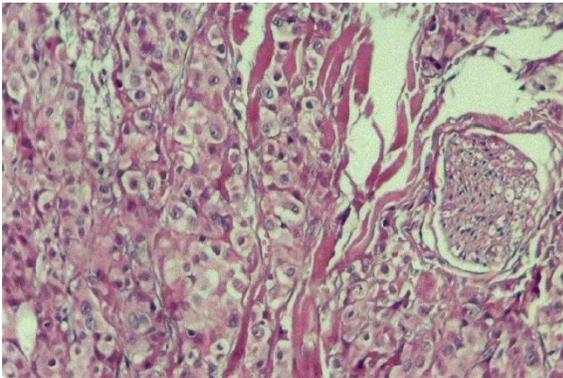


Figure 2 Histomicrograph showing multiple islands of tumour cells among the collagen fibres in the upper and lower dermis. The epidermis was separated from the tumor nests by a narrow Grenz zone.

a narrow Grenz zone. On high power examination, pleomorphic tumour cells with tendency to form glandular structure and having prominent nucleoli and frequent mitoses were seen (**Figure 2**). The features were those of metastatic adenocarcinoma of the skin.

The patient was anemic (Hb 8g/dl). Other parameters of complete hemogram and routine biochemical studies were within normal limit. Routine urine test, stool for occult blood were negative. She was HIV seronegative. In search of primary tumor, ultrasonography of whole abdomen, X ray chest, CT scan of thorax and whole abdomen, X ray of long bones, bronchoscopy, endoscopy and colonoscopy were undertaken but nothing gave out any clue. Pap smear showed normal cytology. Blood level of carcinoembryonic antigen was not elevated. We contemplated immunocytochemical studies of tissue biopsy specimen but the patient could not afford those.

Discussion

A study in 1973 comprising of 724 patients with cutaneous metastases found that in 21% of cases the cutaneous metastasis preceded documentation of primary tumor.² Similarly, in our case, the malignant disease manifested as metastatic cutaneous deposits first and much earlier than the primary tumor grew up to a size enough for its diagnosis through clinical examination and standard investigations. Cutaneous metastases occur in 0.7% to 9.0% of all patients with cancers. Incidence of various tumors metastasizing to the skin correlates with the sex-wise frequency of occurrence of various primary malignancies.³ Skin metastases is the first sign of extranodal disease in 7.6% of cancer patients.⁴

Breast carcinoma (69%) is the commonest cause of cutaneous metastases in women followed by carcinoma of the large intestine (9%), lungs and ovaries (4%). The primary sites of carcinoma with cutaneous metastases among men in decreasing order are lungs (24%), large intestine (19%), oral cavity (12%), kidney and stomach (6% each).⁵ Cutaneous metastases as the first

sign of internal malignancy are seen most frequently with carcinoma of the lung, kidney and ovary. Most cutaneous metastases arise as non-specific, painless, dermal or subcutaneous nodules with an intact overlying epidermis.⁶ Abdominal wall is the most common site for tumors presenting as cutaneous metastatic disease with carcinoma lung being the most frequent cause of metastatic deposit to abdominal wall.⁷

Cutaneous involvement may occur by three different mechanisms: direct invasion, local metastatic disease, or distant metastasis.⁸ Cutaneous metastases, however, must be distinguished from primary skin tumors. The clinical history is usually very helpful. Cutaneous metastases tend to grow quickly and are more commonly multiple. In contrast, the clinical history is much longer for primary adnexal tumors. Histopathologically, cutaneous metastases are much more disorganized than primary tumors with dissection of collagen. They tend to involve the dermis and are rarely epidermotropic. Vascular invasion is more readily identified.¹ These clinico-pathological clues helped us to reach the diagnosis in the present case.

We report the case because of its peculiarity that even eleven months after the occurrence of two

lesions of florid cutaneous metastases that appeared almost simultaneously, primary tumor or metastasis to a second organ could still not be identified despite thorough investigation.

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